



**Level III
of the
CFA® Program**

Constructed Response Set
Portfolio Management Pathway

Essay 3:
Blake Thompson

Learning Outcomes Covered:

LM 7: (Trade Strategy and Execution)

LOS: Describe factors that typically determine the selection of a trading algorithm class

LOS: Explain how trade costs are measured and determine the cost of a trade

LOS: Contrast key characteristics of the following markets in relation to trade implementation: equity, fixed income, options and futures, OTC derivatives, and spot currency

TOTAL POINT VALUE OF THIS QUESTION SET IS 12 POINTS

Blake Thompson

Blake Thompson, head trader at Sigma Capital Management, is reviewing several trading situations on a **volatile market day**. A recent Federal Reserve announcement has led to increased volatility across markets, with the main **equity index up 2.5%** in the first hour of trading.



TOTAL POINT VALUE OF THIS QUESTION SET IS 12 POINTS

Blake Thompson

At 10:00 AM, Thompson receives a sell order from Sarah Rodriguez, a portfolio manager for Sigma's Small Cap Fund. She believes CloudBurst Technologies has peaked after a strong run and wants to liquidate its position of 50,000 shares, representing approximately **15% of the stock's average daily volume**. The stock is currently trading at **\$42.50, up from its opening price of \$41.80**. Rodriguez's analysis suggests **fair value is closer to \$40.00**.



TOTAL POINT VALUE OF THIS QUESTION SET IS 12 POINTS

Blake Thompson

Meanwhile, Thompson is analyzing a recently completed buy trade in MarketLogic Inc.:

Trade Details:

- **Decision Price (9:30 AM):** \$25.00
- **Order Released (9:45 AM):** \$25.20
- **Order Size:** 30,000 shares
- **Shares Executed:** 25,000 shares
- **Average Execution Price:** \$25.45
- **Market Index at Order Release:** 1,000
- **Market Index VWAP During Trade:** 1,010
- **MarketLogic Beta to Index:** 1.15
- **Closing Price:** \$25.60
- **Commission:** \$0.02 per share

TOTAL POINT VALUE OF THIS QUESTION SET IS 12 POINTS

Blake Thompson

Thompson also oversees trading for Sigma's Global Fixed Income Fund. The fund needs to **sell several large corporate bond positions to meet month-end redemptions**. While most of the bonds are relatively liquid investment-grade issues, a few are **high-yield bonds that typically trade only a few times per week**.



TOTAL POINT VALUE OF THIS QUESTION SET IS 12 POINTS

Blake Thompson

At the end of the day, Thompson reviews algorithm usage with the trading desk. His junior trader suggests implementing the new "SmartVWAP" system, which claims to improve on traditional VWAP by **dynamically adjusting participation rates based on real-time price trends**. The system documentation states: "SmartVWAP monitors price movements throughout the trading session, automatically increasing participation when prices are favorable and reducing participation when prices move adversely. This ensures optimal execution by combining the **benefits of traditional VWAP with real-time price adaptation.**"

Question 1

Consider the following algorithms for the CloudBurst order:

- A. VWAP algorithm with 10% participation rate
- B. Arrival price algorithm with an aggressive execution profile
- C. Dark pool aggregator focusing on minimal information leakage

Select the most appropriate algorithm. **Justify** your selection and explain why the other options are less suitable. (3 pts)

Question 2

Calculate the market-adjusted cost in basis points for the MarketLogic trade. Show your work. (3 pts)

Question 3

For the high-yield bond liquidation, consider these approaches:

- A. Principal trade through multiple dealers requesting competitive quotes.
- B. High-touch agency trade working with selected brokers over several days.

Determine the most appropriate approach. **Justify** your choice and explain why the alternative is less suitable. (3 pts)

Question 4

Evaluate whether SmartVWAP's claimed price-adaptive feature would improve execution quality compared to traditional VWAP algorithms. **Justify** your response. (3 pts)

Q1. Consider the following algorithms for the CloudBurst order:

Constructed Response

- A. VWAP algorithm with 10% participation rate
- B. Arrival price algorithm with aggressive execution profile
- C. Dark pool aggregator focusing on minimal information leakage

Select the most appropriate algorithm. **Justify** your selection and explain why the other options are less suitable. (3 pts)

Grading



Selection and primary justification: 1 point; Evaluation of VWAP option: 1 point; Evaluation of dark pool option: 1 point